

Claims 1-15, 17, and 27-34 have been amended, and, thus, claims 1-18 and 25-34 remain pending for reconsideration, which is requested.

No new matter has been added in this Amendment. The foregoing rejections are respectfully traversed.

PRESENT CLAIMED INVENTION

The independent claims are amended to emphasize the patentably distinguishing features of the present invention.

At least one primary feature of the present invention is to provide a network system that manages in real-time objects of an object-oriented network system worker group by worker group by defining a group of workers as a job. Treating (defining) a group of workers as a job has the advantage of simplifying job object sharing among workers of the groups as well as member movement among the groups of workers.

As another feature, a job definition form assigning job objects to the groups of worker (worker groups treated as jobs) is generated to facilitate managing the job objects worker group by worker group or sharing job objects among the groups of workers. A real jobs is a task performed by workers of the groups on networked computers that involve processing objects/resources of the object-oriented system (job objects), such as programs, windows, and data, including voice, moving images, still images, databases, etc.

Therefore, the present invention relates to real-time managing objects of object-oriented systems on a network worker group by worker group. The relied upon references differ from the claimed present invention, because, if assuming a resource is a worker, the systems of the relied upon references relate to modeling projects or project management based upon assigning and managing worker according to jobs.

Support for the claim amendments can found, for example: see, in the specification, page 1, lines, 10-16; page 2, line 27 to page 3, line 22; page 8, lines 19-20; page 13, lines 4-6; page 15, line 34 to page 16, line 20; FIG. 15, and description of FIG. 16 starting on page 20.

PRIOR ART

Fargher

As the primary reference, Fargher does not disclose the details of how information is organized when planning a production schedule within a factory. Therefore, Fargher merely discloses a method for planning a production schedule within a factory (Abstract).

In particular, Fargher discloses a plan representation chosen to model the manufacturing environment. The plan representation is based on the processing capacity of resource groups within the factory. Each resource group has an associated set of processing capabilities, which every member of the group is able to perform. Since a single semiconductor manufacturing machine may perform several different processes, a machine may be a member of several different resource groups. See col. 7, lines 13-33.

Although, Fargher discloses that "a machine may be a member of several different resource groups" (col. 7, lines 25-26), Fargher discloses that the plan representation does not distinguish which resources, within a resource group, is planned to process a particular piece of work represented within a plan. Fargher, simply commits processing time for the "whole resource group" to a particular piece of work (i.e., a job, col. 7, lines 34-36) to determine processing capacity of each resource group (Abstract). Therefore, the Fargher system differs from the present invention, because, if assuming a resource is a worker, the Fargher system assigns/manages worker groups according to jobs.

Matsuzaki

Matsuzaki, merely discloses a method for supporting development and design of a new product as shown in Fig. 1. In particular, Matsuzaki organizes information relating to product development according to jobs (Fig. 2). For example, in col. 14, lines 8-12, Matsuzaki discloses an identification code identifying a responsible member responsible to the activity (job) for exchanging inquiries with other members regarding job status (i.e., a responsible member is assigned to a job). Matsuzaki discloses storing resource models, however, does not disclose or suggest the details of how resource information is or should be organized/stored and how such resources are used. Therefore, if assuming a resource is a worker, the Matsuzaki system differs from the present invention, because it stores and manages workers according to jobs. Col. 5, lines 51-55; and col. 7, lines 25-27.

IBM Bulletin Disclosure

The IBM Disclosure relates to administration of computer resources in a computer system. In particular, the ACL is organized according to system resources, in which identifiers (users, groups, locations, projects) requesting access to the computer resources are assigned to the computer resources. The assignment is performed according to the DAC. The DAC is based upon assigning permission information to the computer resources. The IBM system differs from the present invention, because according to page 2 of the IBM Bulletin Disclosure, the identifiers (users, groups, locations, projects) are assigned to computer resources.

Rapoza

Rapoza merely discloses project management software to provide superior workgroup features and useful planning aids. In a ManagePro window of Rapoza, a manager shares information about projects and "resources assigned to those projects," page 1, 3rd paragraph. Therefore, if assuming a resource is a worker, Rapoza discloses that workers are assigned to projects. See, Rapoza, page 1, 7th and 8th paragraphs under Management Tools heading.

Although, Rapoza, page 1, 9th paragraph, lines 2-5, appears to disclose assigning tasks to employees from virtually any window, this disclosure also provides that the tasks can be assigned to employee when adding a member to the notebook testing team (i.e., members are assigned to a project as disclosed in Rapoza, page 1, 8th paragraph). Further, Rapoza's people management relates to providing feedback and performance review information (Abstract) and does not relate to the present invention that assigns job objects to worker groups. Further, although, Rapoza in page 2, 13th paragraph, appears to disclose that "ManagePro even allowed us to choose whether to use the program just to manage people, just to manage goals, or for variations on these options (emphasis added), Rapoza does not expressly disclose how job resources are stored and/or used. Therefore, the present invention differs from the Rapoza system, because according to page 1, 8th paragraph, in the Rapoza system configuration workers are assigned to a job.

CLAIMS 1, 27, 30, 33 and 34 REJECTIONS

In contrast to the above relied upon references, the present invention provides a real-time job object manager according to "worker groups." The system of the invention defines "a group of workers as a job" and assigns job objects to the group of workers. Using claim 1 as an example, the claimed present invention comprises:

- . . . generating job definition forms defining worker groups that process the job objects according to job-object conditions, thereby representing a group of workers as a job;
- managing the job-object conditions worker group by worker group in real-time;
- a job monitor monitoring, in real-time, job processing by the worker groups based upon the job definition forms . . .
- a scheduler establishing the job-object conditions and scheduling each worker group to process the job objects according to each worker group procedure defined in the job definition form, in response to the job processing information provided by said job monitor (claim 1).

Further, in contrast to the relied upon references, the claimed present invention as

recited in claims 33 and 34 provides: "to assign a specified job object to the groups of workers."

CLAIMS 6-11, 12-18, 25 and 26 REJECTIONS

According to a second aspect of the invention, the present invention relates to allowing real-time permitted job object sharing among the groups of workers. Dependent claims 6-11 and 12-18, 25 and 26 relate to the second aspect of the invention. Regarding rejection of the second aspect claims, the Examiner asserts obviousness without any documentary evidence (see for example, page 6, 3rd paragraph, second sentence, through page 7, 3rd full paragraph, of the Office Action). The Applicants respectfully request documentary evidence in support of obviousness in compliance with the USPTO's February 21, 2002 Memorandum on Relying on Facts Which are Not of Record as Common Knowledge or for Taking Official Notice (copy attached).

CONCLUSION

Dependent claims 2-18, 25, 26 and 32 (depending, either directly or indirectly, from claim 1); 28-29 (depending, either directly or indirectly, from claim 27); and 31 (depending from claim 30) are also patentably distinguishing over the foregoing references at least due to their dependencies from the independent claims 1, 27 and 30.

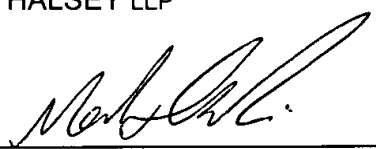
In view of the amendments and remarks presented, withdrawal of the rejection of claims 1-18 and 25-34, and allowance of claims 1-18 and 25-34 is respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,
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on January 23, 2003
by STAAS & HALSEY
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Date: January 23, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1-15, 17, and 27-34 are **AMENDED** as follows.

Recitation of all pending claims is provided for reference convenience.

1. (FIVE TIMES AMENDED) A system real-time managing [resources]object-oriented system objects as job objects among groups of workers as worker groups in communication with each other via networked computers [allocated to groups of workers that carry out jobs using computers], said system comprising:
 - a form generator generating job definition forms defining worker groups that process the job objects according to job-object conditions, thereby representing a group of workers as a job;
 - a resource manager [that stores groups of workers and assigns resources of jobs to]managing the job-object conditions worker group by worker group in real-time [the groups of workers, each resource being further allocated for use by workers of the group in performing each job to be carried out by the group, and permission information provided for each resource];
 - a job monitor [that monitors the jobs carried out by]monitoring, in real-time, job processing by the worker groups [, maintains the]based upon the job definition forms and maintaining security of the [resources assigned to the groups using the permission information]job objects according to the job-object conditions in real-time, [and]thereby for a first worker group [inhibits]inhibiting access to the [resources]job objects thereof from another worker group to which permission to use the [resources]job objects of the first worker group is not allocated; and
 - a scheduler [that schedules the jobs of]establishing the job-object conditions and scheduling each worker group to process the job objects according to [a] each worker group procedure [specific to the group and] defined in the job definition form, in response to the job processing information provided by said job monitor.

2. (FOUR TIMES AMENDED) The system according to claim 1, [further comprising a job storage that stores a job definition form defining for each group the jobs, the form indicating rights to use the resources,]wherein said resource manager, job monitor, and scheduler exchange rights to use the [resources]job objects among the worker groups [according to the job definition form].

3. (TWICE AMENDED) The system according to claim 1, further comprising a

rearranging unit that manages and rearranges the members and [resources]job objects of the worker groups according to progress of the jobs, wherein said job monitor monitors the jobs and [resources]job objects of the worker groups according to information from said rearranging unit.

4. (TWICE AMENDED) The system according to claim 1, wherein:
an emergency worker group is allowed to access every [resource]job object of every worker group; and
said job monitor accepts any request from the emergency worker group for accessing a [resource]job object.

5. (TWICE AMENDED) The system according to claim 1, wherein said job monitor performs at least one of transferring a [resource]job object from one of the worker groups to another worker group and automatically changing the [resources]job objects of any one of the worker groups according to a procedure.

6. (THREE TIMES AMENDED) The system according to claim 1, wherein the job definition forms define group permission information, the system further comprising a request unit that, when a first group makes a request to use a [resource]job object of a second group, uses the group permission information [provided for the resource] to contact the second group for permission to use the [resource]job object.

7. (TWICE AMENDED) The system according to claim 6, wherein said request unit uses one of a telephone and a pager to request the second worker group for permission to use the [resource]job object.

8. (TWICE AMENDED) The system according to claim 6, wherein said request unit uses one of a telephone, a notebook computer, an electronic notepad, and a workstation through one of a wide-area network, a personal computer communication network, and a wireless network to request the second worker group for permission to use the [resource]job object.

9. (TWICE AMENDED) The system according to claim 6, further comprising a visual I/O unit and an audio I/O unit to request the second worker group for permission to use the [resource]job object.

10. (TWICE AMENDED) The system according to claim 6, further comprising:
an input device, attached to a selected member of the second worker group, for identifying and locating the member; and
a positioning unit generating an image of the selected member, said input unit and positioning unit being used to directly request the member of the second worker group for permission to use the [resource]job object.

11. (TWICE AMENDED) The system according to claim 6, wherein said job monitor holds the schedules of the jobs of the worker groups and exchanges the jobs among the worker groups.

12. (THREE TIMES AMENDED) The system according to claim 6, wherein said job monitor limits location, period, and each worker group to handle a [resource]job object, to thereby strictly maintain the security of the [resource]job object.

13. (TWICE AMENDED) The system according to claim 6, wherein said job monitor indicates whether permission for use of the [resource]job object is to be granted upon approval of all or some of the members of the second worker group.

14. (TWICE AMENDED) The system according to claim 6, wherein said job monitor adds a name of a worker group to which a [resource]job object belongs to a name of the [resource]job object, whereby plural [resources]job objects having the same name can be allocated to the worker group.

15. (TWICE AMENDED) The system according to claim 6, wherein said job monitor allocates a representative name to a set of [resources]job objects and identically handles the [resources]job objects under the representative name.

16. (as ONCE AMENDED) The system according to claim 10, wherein said input device is a virtual-reality device attached to the selected member, to identify the location of the member.

17. (TWICE AMENDED) The system according to claim 10, wherein said input

device is a head-mount display worn by the selected member so that the member may give permission to use the [resource]job object.

18. (as ONCE AMENDED) The system according to claim 10, wherein said input device is provided with at least one of a password and an ID, to prevent illegal access to said input device.

25. (as UNAMENDED) The system according to claim 9, wherein:
said visual I/O unit is a television camera; and
said audio I/O unit is a microphone.

26. (as UNAMENDED) The system according to claim 10, wherein:
said input unit is one of a sensor and a transmitter; and
said positioning unit is a television camera.

27. (FOUR TIMES AMENDED) A method of real-time groupwise [resource management]managing object-oriented system objects as job objects, comprising:
storing groups of workers as worker groups;
generating job definition forms defining the worker groups that process job objects according to job-object conditions, thereby representing a group of workers as a job;
[assigning resources of jobs to the groups of workers, each resource being further allocated for use by workers of the group in performing each job to be carried out by the group]managing the job-object conditions worker group by worker group in real-time;
monitoring [the jobs carried out by each group], in real-time, job processing by the worker groups based upon the job definition forms;
maintaining security of [each of] the [resources assigned to the groups]job objects according to the job-object conditions in real-time;
inhibiting access to a [resource]job object of a first worker group from another worker group to which permission to use the [resource]job object of the first worker group is not allocated; and
[scheduling the jobs carried out by]establishing the job-object conditions and scheduling each worker group [in accordance with a]to process the job objects according to each worker group procedure [specific to the group]defined in the job definition forms, in response to the job processing [and information provided through monitoring the jobs].

28. (TWICE AMENDED) The method according to claim 27, further comprising [storing a job definition form defining for each group the jobs, the form indicating rights to use the resources]setting as one of the job-object conditions rights to use the job objects among the worker groups processing the job objects.

29. (THREE TIMES AMENDED) The method according to claim 28, wherein as the job object conditions a [the] job definition form identifies for [each job carried out by] each worker group, [as] information indicating the rights to use the [resources]job objects, and at least one of a job period, worker group members, processes, the [resources]job objects allocated to the job carried out by the worker group, and permission information of the [resources]job objects.

30. (FOUR TIMES AMENDED) A computer-readable medium encoded with a program [for groupwise resource management, said program including the functions of]real-time groupwise managing object-oriented system objects as job objects, comprising:

storing groups of workers as worker groups;

generating job definition forms defining the worker groups that process job objects according to job-object conditions, thereby representing a group of workers as a job;

[assigning resources of jobs to the groups of workers, each resource being further allocated for use by workers of the group in performing each job to be carried out by the group]managing the job-object conditions worker group by worker group in real time;

monitoring [the jobs carried out by each group], in real-time, job processing by the worker groups based upon the job definition forms;

maintaining security of [each of the resources assigned to the groups]the job objects according to the job-object conditions in real-time;

inhibiting access to a [resource]job object of a first worker group from another worker group to which permission to use the [resource]job object of the first worker group is not allocated; and

[scheduling the jobs carried out by]establishing the job-object conditions and scheduling each worker group [in accordance with]to process the job objects according to each worker group procedure [specific to the group]defined in the job definition form, in response to the job processing [and information provided through monitoring the jobs].

32. (THREE TIMES AMENDED) The system according to claim 2, wherein as the

job-object conditions a [the] job definition form identifies for [each job carried out by] each worker group, [as the] information indicating [the] rights to use the [resources]job objects, and at least one of a job period, worker group members, the [resources]job objects allocated to the job to be carried out by the worker group, and the permission information of the [resources]job objects.

33. (THREE TIMES AMENDED) A system [for]real-time managing [resources used by groups of workers carrying out jobs through] object-oriented system objects as job objects among groups of workers as worker groups in communication with each other via networked computers, said system comprising:

a [resource]job object manager to store one or more groups of workers, to assign a specified [resource]job object to the groups of workers, to store permission information for the specified [resource]job object, and to determine whether the specified [resource]job object is available to a first worker group based on the assignment information; and

a job monitor to receive from said [resource]job object manager information indicating whether the specified [resource]job object is available to the first worker group, and to request permission for the first worker group to access the specified [resource]job object from a second worker group to which the [resource]job object is assigned, using the permission information of the specified [resource]job object, when the received information indicates the specified [resource]job object is not available to the second worker group.

34. (THREE TIMES AMENDED) A system [for]real-time managing [resources used by groups of workers carrying out jobs] object-oriented system objects as job objects among groups of workers as worker groups in communication with each other through network clients, said system comprising:

a file storage to store files of [resources]job objects and to store permission information for the [resources]job objects, whereby groups of workers can access the [resources]job objects through the network clients [over a network]; and

a server coupled by the network to said file storage and to the clients, said server allocating a corresponding [resource]job object to one or more of the worker groups, determining whether the [resource]job object is available to a requesting worker group based on the allocation information, and selectively changing the allocation information by using the permission information when a job requires access to the [resource]job object.